

ABSTRACT OF THE DISCLOSURE

This invention provides an interconnecting neural network system capable of freely taking a network form for inputting a plurality of input vectors, and facilitating additionally training an artificial neural network structure. The artificial neural network structure is constructed by interconnecting RBF elements relating to each other among all RBF elements via a weight. Each RBF element outputs an excitation strength according to a similarity between each input vector and a centroid vector based on a radius base function when the RBF element is excited by the input vector applied from an outside, and outputs a pseudo excitation strength obtained based on the excitation strength output from the other RBF element when the RBF element is excited in a chain reaction to excitation of the other neuron connected to the neuron.